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| STETINA BRUNDA GARRED & BRUCKER | | | LONG, HEATHER R | |
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| ALISO VIEJO, CA 92656 | | | PAPER NUMBER | |

2615

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,135

Applicant(s)

JUNG ET AL.

Examiner

Heather R Long

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-32 and 34 is/are rejected.
- 7) ☒ Claim(s) 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/7-10-2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6 and 7 recite the limitation "said handle portion" in line 1. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 22 recites the limitation "said image processor unit" in line 1. There is insufficient antecedent basis for this limitation in the claim.
4. Claims 24 and 25 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims and the specification are vague in how a recorded or formatted image can act as a predetermined instruction in order to control the operations of at least one of the control mechanism, the camera unit, the light sources and the display device based on at least one predetermined instruction.

Specification

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: claim 30, 31, and 33: there is no antecedent basis for the noise elimination and illumination equalization as part of the image enhancement provided in the specification.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-4, 10, 11, 13, 14, 16, 22, 23, 26-28, 30, 32, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (U.S. Patent 5,748,228).

Regarding claim 1, Kobayashi et al. discloses an apparatus for facilitating viewing of an object by human eye, the apparatus comprising: a holder mechanism (1) comprising a support portion having opposing first and second support surfaces (the support portion consists of the front and back surfaces of the camera body as seen in Fig. 1A); at least one light source (7) disposed on the holder mechanism first surface to illuminate at least a portion of the object; at least one electronic camera unit (2) disposed on the holder mechanism first surface, the camera being operative to record (in 23) at least one image of the object; at least one image processor module (26) in electrical communication with the camera unit (2) to format the recorded image for display (col. 7, line 51 – col. 8, line 11); at least one image display (3) having a display region, the display

device (3) disposed on the holder mechanism second surface and in electrical communication with the image processor module (26) to display the formatted image on the display region; and at least one user-interface control mechanism (4, 5, 6, 13, 15) disposed on the holder mechanism (1) and in electrical communication with the image processor module (26) for controlling the operations of the module to regulate display of the image by the display device (3) (col. 4, lines 1-40; col. 7, lines 37-50).

Regarding claim **2**, Kobayashi et al. discloses in Fig 7 an apparatus further comprising: at least one power source housed in the holder mechanism (1) to provide operational power to at least one of the camera unit (2), image processor system light sources (7) and image display device (3) (col. 4, lines 50-54).

Regarding claim **3**, Kobayashi et al. discloses an apparatus wherein the control mechanism (13, 6) is to regulate at least one of a magnification and an illumination intensity of the image displayed by the display device (3) (col. 6, lines 50-54).

Regarding claim **4**, Kobayashi et al. discloses an apparatus wherein the control mechanism (6) is to regulate the display of the image by the display device (3) in response to display adjustments by a user (col. 6, lines 50-54).

Regarding claim **10**, Kobayashi et al. discloses an apparatus wherein the display device is a liquid crystal display (LCD) device (col. 6, lines 55-65).

Regarding claim **11**, Kobayashi et al. discloses an apparatus wherein the control mechanism (4, 5, 6, 13) is disclosed on the support portion.

Regarding claim **13**, Kobayashi et al. discloses an apparatus wherein the control mechanism (4, 5, 6, and 13) further comprises: at least one mode selection device for browsing and selecting at least one operation of the image processor mode (col. 4, lines 21-29; col. 6, lines 50-54)

Regarding claim **14**, Kobayashi et al. discloses in Fig. 15 an apparatus wherein the mode selection switch is a manual input button (4, 5, 6).

Regarding claim **16**, Kobayashi et al. discloses in Fig. 16 an apparatus wherein the mode selection device is a finger operated adjusting sliding switch (4, 5).

Regarding claim **22**, Kobayashi et al. discloses in Fig. 16 an apparatus wherein the image processing unit comprises: at least one processor system in electrical communication with, to receive operational data from and to control operations of at least one of the control mechanism, the camera unit (2), the light sources (7) and the display device (3) based on at least one predetermined instruction (col. 7, line 51 – col. 8, line 11); and at least one electronic image memory storage medium (it is inherent to store the expanded image temporarily in a storage medium as for it to be subsequently displayed) and retrieval of the predetermined instruction by the processor system (it is inherent a buffer exists in the image processor module (26) for temporarily storing and then removing the instruction from the enlarged portion specifying portion (27) (col. 7, lines 55-60)).

Regarding claim **23**, Kobayashi et al. discloses an apparatus wherein the predetermined instruction is a user-inputted instruction received from the control mechanism (col. 7, lines 46-63).

Regarding claim **26**, Kobayashi et al. discloses an apparatus wherein the predetermined instruction includes instructions to adjust at least one of a magnification level, an illumination level, an image enhancement and a focusing resolution level of the displayed image (col. 7, lines 46-50).

Regarding claim **27**, Kobayashi et al. discloses an apparatus wherein the predetermined instruction includes instructions to adjust at least one of a focusing characteristic of the camera unit and the illumination intensity of the light source (col. 7, lines 46-50).

Regarding claim **28**, Kobayashi et al. discloses an apparatus wherein the image processing module (26) is a microcomputer (col. 7, lines 64-65).

Therefore, it is inherent that the microcomputer is a programmable image processing module because the image processing module receives instructions from the operator concerning the portions of the image to be enlarged and how big to enlarge that portion (col. 7, line 51 – col. 8, line 11).

Regarding claim **30**, Kobayashi et al. discloses an apparatus wherein the image enhancement includes at least one of an adjustment contrast and brightness, a noise elimination, a color re-mapping, an inverse video displaying, an illumination equalization mode, image shifting, image stabilization, and image freezing (col. 4, lines 21-29).

Regarding claim **32**, Kobayashi et al. discloses an apparatus wherein the inverse video displaying includes display text wherein the colors of text and background are switched (col. 4, lines 21-29).

Regarding claim **34**, Kobayashi et al. discloses in Fig. 15 an apparatus wherein the apparatus is a portable apparatus.

8. Claims 1-8, 12-14, 17, 18, 20, 21, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Bronson (U.S. Patent 6,384,863).

Regarding claim **1**, Bronson discloses in Figs. 1A and 2A an apparatus for facilitating viewing of an object by human eye, the apparatus comprising: a holder mechanism comprising a support portion having opposing first and second support surfaces (the support portion consists of the front and back surfaces of the camera body as seen in Fig. 1A); at least one light source (140) disposed on the holder mechanism first surface to illuminate at least a portion of the object; at least one electronic camera unit disposed on the holder mechanism first surface, the camera being operative to record at least one image of the object (col. 3, lines 1-10); at least one image processor module in electrical communication with the camera unit to format the recorded image for display (Bronson does not explicitly state what is being used as the image processor module exactly, but it is inherent that the apparatus disclosed by Bronson comprises an image processor module because the microprocessor responds to the instruction of displaying the previous picture and an image processor module would have to retrieve the previous picture and display it, meanwhile it would have to format the

image for display (col. 3, lines 11-19 and 49-55)); at least one image display having a display region, the display device disposed on the holder mechanism second surface and in electrical communication with the image processor module to display the formatted image on the display region; and at least one user-interface control mechanism (110, 210, and 220) disposed on the holder mechanism and in electrical communication with the image processor module for controlling the operations of the module to regulate display of the image by the display device (220) (col. 2, line 18 - col. 3, line 20 and lines 44-61; col. 4, lines 24-27 and 31-44).

Regarding claim 2, Bronson discloses in Fig. 1A an apparatus further comprising: at least one power source (130) housed in the holder mechanism to provide operational power to at least one of the camera unit, image processor system light sources (140) and image display device (220) (col. 2, lines 32-33).

Regarding claim 3, Bronson discloses an apparatus wherein the control mechanism is to regulate at least one of a magnification and an illumination intensity of the image displayed by the display device (col. 3, lines 49-61; col. 4, lines 31-44).

Regarding claim 4, Bronson discloses an apparatus wherein the control mechanism is to regulate the display of the image by the display device (220) in response to display adjustments by a user (col. 3, lines 49-61; col. 4, lines 31-44).

Regarding claim **5**, Bronson discloses in Fig. 1A an apparatus with the holder mechanism further comprising: at least one handle portion (100) connected to the support portion (col. 2, lines 13-17).

Regarding claim **6**, Bronson discloses in Fig. 1A an apparatus wherein the handle portion is integrally connected to the support portion (col. 2, lines 13-17).

Regarding claim **7**, Bronson discloses an apparatus wherein the handle portion is pivotally connected to the support portion (col. 2, lines 40-44).

Regarding claim **8**, Bronson discloses in Fig. 1B an apparatus wherein the light source portion is rotatably connected to the support portion (col. 2, lines 54-58).

Regarding claim **12**, Bronson discloses in Figs. 1A and 2A an apparatus wherein the control mechanism is disposed on the handle portion (col. 2, lines 18-19; col. 3, lines 45-61).

Regarding claim **13**, Bronson discloses an apparatus wherein the control mechanism further comprises: at least one mode selection device for browsing and selecting at least one operation of the image processor mode (col. 3, lines 11-21).

Regarding claim **14**, Bronson discloses in Figs. 1A and 2A an apparatus wherein the mode selection switch is a manual input button (110 or 210) (col. 2, lines 18-19; col. 3, lines 49-61).

Regarding claim **17**, Bronson discloses an apparatus wherein the mode selection device is a graphic user interface device (col. 3, lines 55-61; col. 4, lines 38-41).

Regarding claim **18**, Bronson discloses an apparatus wherein the mode selection device is a graphic user interface device displayed on a portion of the display region (col. 3, lines 55-61; col. 4, lines 38-41).

Regarding claim **20**, Bronson discloses in Fig. 1A an apparatus wherein the power source is housed in a handle portion of the holder mechanism wherein the handle portion is connected to the support portion (col. 2, lines 32-39).

Regarding claim **21**, Bronson teaches an apparatus wherein the power source is at least one of a battery unit and an externally connected power source. Bronson states that the main body houses a power supply, which consists of batteries (col. 2, lines 32-39).

Regarding claim **34**, Bronson discloses in Figs. 1A and 2A an apparatus wherein the apparatus is a portable apparatus.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 9 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to claim 1 above.

Regarding claim **9**, Kobayashi et al. fails to disclose that the camera unit in the apparatus is a charge-coupled device (CCD) camera unit. However, Official Notice is taken that it is well known and expected in the art to use a charge-coupled device (CCD) camera unit as a camera unit.

Regarding claim **31**, Kobayashi et al. fails to disclose noise elimination that includes filtering of undesired features of an object. However, Official Notice is taken that it is well known in the art of photography to filter undesired features of an object in order to enhance the quality of the image. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added this feature to the apparatus as disclosed by Kobayashi in order to eliminate undesired features thereby producing a higher quality image allowing the user to be able to clearly read the text and to prevent blurring of the text.

11. Claims 15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to claim 1 above, and further in view of Bronson (U.S. Patent 6,834,863).

Regarding claims **15**, **17**, and **18**, Kobayashi et al. differs from claims 15, 17, and 18 by failing to disclose an apparatus wherein the mode selection device is a finger operated adjusting rolling switch or a graphic user interface device that is displayed on a portion of the display region.

Referring to the Bronson reference, Bronson discloses an alternative to have a plurality of mode selection devices and suggests having a mode selection device that is a finger operated adjusting scrolling key that permits selecting display functions using a graphic user interface device that is displayed on a display (col. 3, lines 55-61). Although the scrolling key is not specifically identified as a rolling switch it is well known to scroll through regions of a display using a rolling switch such as a track ball.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Bronson with Kobayashi et al. in order to provide an apparatus with only one or two buttons on the surface portion that may be used to select features displayed on a display region instead of using a plurality of buttons that would require a larger support portion to accommodate the extra buttons.

12. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to claim 1 above, and further in view of Hoshino et al. (U.S. Patent 5,027,149).

Regarding claim **19**, claim 19 differs from Kobayashi et al. in that claim 19 further requires an apparatus wherein the mode selection device is a voice input device.

Referring to the Hoshino et al. reference, Hoshino et al. discloses a camera, the intended functions thereof being controlled by a voice input device (col. 2, lines 21-24; col. 4, line 35 – col. 5, line 27).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Hoshino et al. with Kobayashi et al. in order to have provided an apparatus that would have been easy to operate if both hands were being used and the operator could not get to the different mode selection devices; this way the operator would be able to vocalize the instructions instead of trying to push the different buttons to go through the camera setting options.

13. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to claim 1 above, and further in view of Piehn et al. (U.S. Patent Application Publication 2001/0056342).

Regarding claim **29**, claim 29 differs from Kobayashi et al. in that the claim further requires an apparatus comprising: at least one optical alpha-numeric character recognition module to recognize at least one of a word and a number in the image; at least one voice synthesizer module to output sound patterns corresponding to a pronunciation of the recognized word and number.

Referring to the Piehn et al. reference, Piehn discloses an apparatus that comprises: at least one optical alpha-numeric character recognition module to recognize at least one of a word and a number in the image; at least one voice synthesizer module to output sound patterns corresponding to a pronunciation of the recognized word and number (paragraphs [0002] and [0004]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Piehn et al.

with Kobayashi et al. in order to provide reading assistance for the visually impaired.

14. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (U.S. Patent 6,384,863).

Regarding claim **9**, Bronson fails to disclose that the camera unit in the apparatus is a charge-coupled device (CCD) camera unit. However, Official Notice is taken that it is well known in the art to use a charge-coupled device (CCD) camera unit as a camera unit since such a design is conventional. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made in order to use a conventional and easily accessible sensor element.

Regarding claim **10**, Bronson fails to disclose an apparatus wherein the display device is a liquid crystal display (LCD) device (col. 4, lines 21-26). However, Official Notice is taken that it is well known to use an LCD device as a microdisplay, such a configuration being easily accessible. Therefore, it would have been obvious to use an LCD device as the microdisplay viewfinder in order to use technology that is well established and conveniently available.

15. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson as applied to claim 1 above, and further in view of Kobayashi et al. (U.S. Patent 5,748,228).

Regarding claim **16**, Bronson fails to disclose an apparatus wherein the mode selection device is a finger operated adjusting sliding switch.

Referring to the Kobayashi et al. reference, Kobayashi et al. discloses in Fig. 16 an apparatus wherein the mode selection device is a finger operated adjusting sliding switch (4, 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Kobayashi et al. with Bronson in order to provide a mode selection device that is a finger operated adjusting sliding switch. One example of a well-known sliding switch is the power switch, which allows the user to be able to glance at the apparatus to determine if the apparatus is off or on (Kobayashi et al.; Fig. 13; col. 4, lines 22-23).

16. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson as applied to claim 1 above, and further in view of Hoshino et al. (U.S. Patent 5,027,149).

Regarding claim 19, claim 19 differs from Kobayashi et al. in that claim 19 further requires an apparatus wherein the mode selection device is a voice input device.

Referring to the Hoshino et al. reference, Hoshino et al. discloses a camera, the intended functions thereof being controlled by a voice input device (col. 2, lines 21-24; col. 4, line 35 – col. 5, line 27).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Hoshino et al. with Bronson in order to have provided an apparatus that would have been

easy to operate if both hands were being used and the operator could not get to the different mode selection devices; this way the operator would be able to vocalize the instructions instead of trying to push the different buttons to go through the camera setting options.

Allowable Subject Matter

17. Claims 33 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, along with fixing any other minor objections to the claim or the specification as stated above.

18. Claims 24 and 25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

19. The following is a statement of reasons for the indication of allowable subject matter: prior art fails to teach or fairly suggest: an apparatus for facilitating viewing of an object by human eye, wherein...

- a. ...the illumination equalization includes modification of illumination brightness over a selected display area to compensate for a non-ideal positioning of the light source (claim 33).
- b. ...wherein the predetermined instruction is the recorded image (claim 24).
- c. ...wherein the predetermined instruction is the formatted image (claim 25).

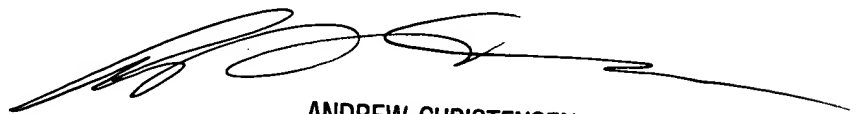
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather R Long whose telephone number is 703-305-0681. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HRL
June 10, 2004



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